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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,760	04/15/2002	Renato J. Recio	10003629-2	4255

22879      7590      12/17/2004

HEWLETT PACKARD COMPANY  
P O BOX 272400, 3404 E. HARMONY ROAD  
INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER

LUU, LE HIEN

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/980,760

Applicant(s)

RECIO ET AL.

Examiner

Le H'Lu

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

1. Claims 2-25 are presented for examination.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2-5, 10-12, 14-17, are 22-24 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by **Chiussi et al. (Chiussi)** patent no. **5,701,292**.

4. As to claim 2, Chiussi teaches the invention as claimed, including a distributed computer system comprising:

links (col. 3 lines 39-45; connections in the network); and  
end stations coupled between the links, wherein types of end stations include endnodes which originate or consume frames and routing devices which route frames between the links and do not originate or consume frames, wherein the end stations include a first source endnode which originates frames at a variable injection rate (col. 1 lines 14-23; col. 3 lines 48-65), wherein the first source endnode includes:

a congestion control mechanism responding to detected congestion by multiplicatively decreasing the variable injection rate (col. 4 lines 17-21; col. 4 line 58 - col. 5 line 11).

5. As to claims 3-5, Chiussi teaches the variable injection rate (IR) is multiplicatively decreased according to  $IR(i+1) = IR(i) * (1/F1)$ , wherein F1 is a constant. Chiussi also teaches the congestion control mechanism responds to detected subsiding of congestion by multiplicatively increasing the variable injection rate wherein the variable injection rate is multiplicatively increased according to  $IR(i+1) = IR(i) * F2$  wherein F2 is a constant (col. 4 line 58 - col. 5 line 11; col. 6 lines 33-37).

6. As to claims 10-11, Chiussi teaches at least one routing device includes a congestion control mechanism detecting congestion on a path the frames route through the at least one routing device; and wherein the at least one routing device includes receive and send port resources, and wherein the at least one routing device's congestion control mechanism detects congestion by analyzing the receive and send port resources (col. 1 lines 14-54).

7. As to claim 12, Chiussi teaches at least one routing device includes: a congestion control mechanism responding to detected congestion by dropping frames that are marked droppable for a time period (col. 1 lines 14-54)

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6-9, 13, 18-21, and 25 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Chiussi et al. (Chiussi)** patent no. **5,701,292**, in view of **Lauck et al. (Lauck)** patent no. **5,734,825**.

10. As to claim 6, Chiussi teaches the invention substantially as claimed as discussed above. In addition, Chiussi teaches the end stations include a first destination endnode which consumes frames originated from the first source endnode, wherein the routing device includes: a congestion control mechanism detecting congestion on a path the frames route from the first source endnode to the first destination endnode (col. 4 line 58 - col. 5 line 11 ). However Chiussi does not explicitly teach the destination endnode includes a congestion control mechanism for detecting congestion.

Lauck teaches end-to-end flow control has a destination end station detects congestion is occurring in the network (col. 1 line 59 - col. 2 line 3).

It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of Chiussi and Lauck to provide a

congestion control mechanism for detecting congestion at the destination endnode because it would control transmission rate of source endnode.

11. As to claim 7, Lauck teaches the first destination endnode's congestion control mechanism detects congestion based on Forward Explicit Congestion Notification (FECN) conditions, and forwards the FECN conditions to the first source endnode (col. 1 line 59 - col. 2 line 3).

12. As to claims 8-9, Lauck teaches the end stations include a first destination endnode which consumes frames originated from the first source endnode, wherein the first source endnode's congestion control mechanism detects congestion on a path the frames route from the first source endnode to the first destination endnode by monitoring a previous variable injection rate and a round trip time for a frame to reach the first destination endnode and an acknowledgement (ACK) for the same from the first destination endnode to reach the first source endnode and the first source endnode's congestion control mechanism detects congestion on a path the same route from the first source endnode by monitoring acknowledgement (ACK) timeouts (col. 8 lines 46-65; col. 13 lines 40-44).

13. As to claim 13, Lauck teaches at least one routing device includes: a congestion control mechanism responding to detected congestion by applying link back pressure by reducing a number of credits available for routing frames through the routing device from a link (col. 14 lines 14-29; col. 14 line 66 - col. 15 line 2; definition of CB begins col. 16 line 52).

14. Claims 14-23 have similar limitations as claims 2-13; therefore, they are rejected under the same rationale.

15. In the remarks, applicant argued in substance that

(A) Prior art does not teach routing devices which route frames between the links and do not originate or consume frames.

As to point (A), Chiussi teaches switches 1 connects to switches 2 ... m. There are plurality of data sources 1, 2 ... n that connect to switch 1. The switches route data between the connections from the data sources to a destination "DES" without originating or consuming the data. Resource management (RM) cell is electronic code that specifies data transfer rate information, e.g. CI, NI, CCR bits, etc. The data is being routed from the data sources to the destination through the switches using data transfer rate information in the RM cell (Fig 1; col. 3 lines 39-65; col. 4 lines 17-21; col. 4 line 58 - col. 5 line 11).

16. Applicant's arguments filed on 9/07/2004 have been fully considered but they are not deemed to be persuasive.

17. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE

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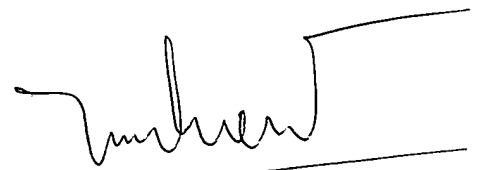
ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Le H Luu whose telephone number is 571-272-3884.

The examiner can normally be reached on 7:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharja can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LE HIEN LUU  
PRIMARY EXAMINER

December 13, 2004